

What is claimed is:

1. A communication device for performing wireless communication, comprising:

5 a measurement-period holding unit which holds for measurement of delay profiles values of a measurement period in correspondence with values indicating one or a combination of a wireless condition or a service quality level;

10 a change recognition unit which recognizes a change in at least one of the wireless condition and the service quality level, and notifies a measurement-period acquisition unit of the change;

15 said measurement-period acquisition unit which acquires from said measurement-period holding unit a value of the measurement period corresponding to said change of which the measurement-period acquisition unit is notified by the change recognition unit; and

20 a delay-profile measurement unit which repeats the measurement of the delay profiles with the measurement period determined by said value acquired by the said measurement-period acquisition unit during a time which is necessary and appropriate for the measurement.

25 2. The communication device according to claim 1, wherein said measurement-period holding unit holds for the measurement of the delay profiles values of the

measurement period in correspondence with values
indicating the number of spreading codes with which the
delay profiles are to be measured, as said wireless
condition, and said change recognition unit recognizes
5 increase or decrease in the number of spreading codes as
a change in the wireless condition.

3. The communication device according to claim 1,
wherein said measurement-period holding unit holds for
10 the measurement of the delay profiles values of the
measurement period in correspondence with values
indicating the measurement time as information
indicating said service quality level, the measurement
time is determined for the measurement of the delay
15 profiles according to reception quality, and said change
recognition unit recognizes increase or decrease in the
measurement time as a change in the service quality
level.

20 4. The communication device according to claim 1,
wherein said measurement-period holding unit holds for
the measurement of the delay profiles values of the
measurement period in correspondence with combinations
of values of the number of spreading codes with which
25 the delay profiles are to be measured and values of a
measurement time which is determined for the measurement
of the delay profiles according to reception quality, as

combinations of said wireless condition and said service quality level, and said change recognition unit recognizes increase or decrease in at least one of the number of spreading codes and the measurement time as
5 said change in at least one of the wireless condition and the service quality level.

5. A communication device for performing wireless communication, comprising:

10 a measurement-time holding unit which holds for measurement of delay profiles values of a measurement time in correspondence with values indicating one or a combination of a wireless condition or a service quality level;

15 a change recognition unit which recognizes a change in at least one of the wireless condition and the service quality level, and notifies a measurement-time acquisition unit of the change;

20 said measurement-time acquisition unit which acquires from said measurement-period holding unit a value of the measurement time corresponding to said change of which the measurement-time acquisition unit is notified by the change recognition unit; and

25 a delay-profile measurement unit which performs the measurement of the delay profiles for the measurement time determined by said value acquired by the said measurement-time acquisition unit, within a

time which is necessary and appropriate for the measurement.

6. The communication device according to claim 5,
5 wherein said measurement-time holding unit holds for the measurement of the delay profiles values of the measurement time in correspondence with values indicating the number of spreading codes with which the delay profiles are to be measured, as said wireless
10 condition, and said change recognition unit recognizes increase or decrease in the number of spreading codes as a change in the wireless condition.

7. The communication device according to claim 5,
15 wherein said measurement-time holding unit holds for the measurement of the delay profiles values of the measurement time in correspondence with values indicating the measurement period as said service quality level, the measurement period is determined for
20 the measurement of the delay profiles according to reception quality, and said change recognition unit recognizes increase or decrease in the measurement period as a change in the service quality level.

25 8. The communication device according to claim 5, wherein said measurement-time holding unit holds for the measurement of the delay profiles values of the

measurement time in correspondence with combinations of values of the number of spreading codes with which the delay profiles are to be measured and values of a measurement period which is determined for the measurement of the delay profiles according to reception quality, as combinations of said wireless condition and said service quality level, and said change recognition unit recognizes increase or decrease in at least one of the number of spreading codes and the measurement period as said change in at least one of the wireless condition and the service quality level.

9. A method for measuring delay profiles, comprising the steps of:
- 15 (a) holding for measurement of the delay profiles values of a measurement period in correspondence with values indicating one or a combination of the number of spreading codes with which the delay profiles are to be measured and a measurement time which is determined for the measurement of the delay profiles according to reception quality;
 - (b) recognizing a change in at least one of the number of spreading codes and the measurement time;
 - (c) changing said measurement period
25 according to said change; and
 - (d) repeating the measurement of the delay profiles with the changed measurement period within a

time which is necessary and appropriate for the measurement.

10. A method for measuring delay profiles,
5 comprising the steps of:

(a) holding for measurement of the delay profiles values of a measurement time in correspondence with values indicating one or a combination of the number of spreading codes with which the delay profiles
10 are to be measured and a measurement period which is determined for the measurement of the delay profiles according to reception quality;

(b) recognizing a change in at least one of the number of spreading codes and the measurement
15 period;

(c) changing said measurement time according to said change; and

(d) performing the measurement of the delay profiles with the changed measurement time within a time
20 which is necessary and appropriate for the measurement.

11. A receiver receiving spread-spectrum wireless signals, and having a function of generating, as information on delay profiles, information on
25 correlation between received signals and spreading codes for detection of timings of delayed waves, wherein:

when there are a plurality of spreading

codes with which the information on the delay profiles is to be generated, said function sets each of the plurality of spreading codes in succession in a correlation detection unit which is provided for
5 measuring the correlations, and detection of the correlations with each of the plurality of spreading codes is repeated with a predetermined period; and

said receiver comprises an updating unit which increases said predetermined period when the
10 number of the plurality of spreading codes increases, or when a measurement time in which each of the correlations is measured with each of the plurality of spreading codes increases.

15 12. A receiver for receiving spread-spectrum wireless signals, and generating delay profiles which indicate timings of delayed portions of the spread-spectrum wireless signals, comprising:

a correlation detection unit which holds in
20 succession each of a plurality of spreading codes which are used for generating the delay profiles, obtains correlations between the spread-spectrum wireless signals and the plurality of spreading codes by measurement repeated with a measurement period which is
25 predetermined for each of the plurality of spreading codes, and generates the delay profiles based on the correlations; and

a measurement-period change unit which increases said measurement period when the number of the plurality of spreading codes increases, or when a measurement time in which each of the correlations is
5 obtained by measurement with each of the plurality of spreading codes increases.